

Instruction Sheet IS 6667 Cable Tapping

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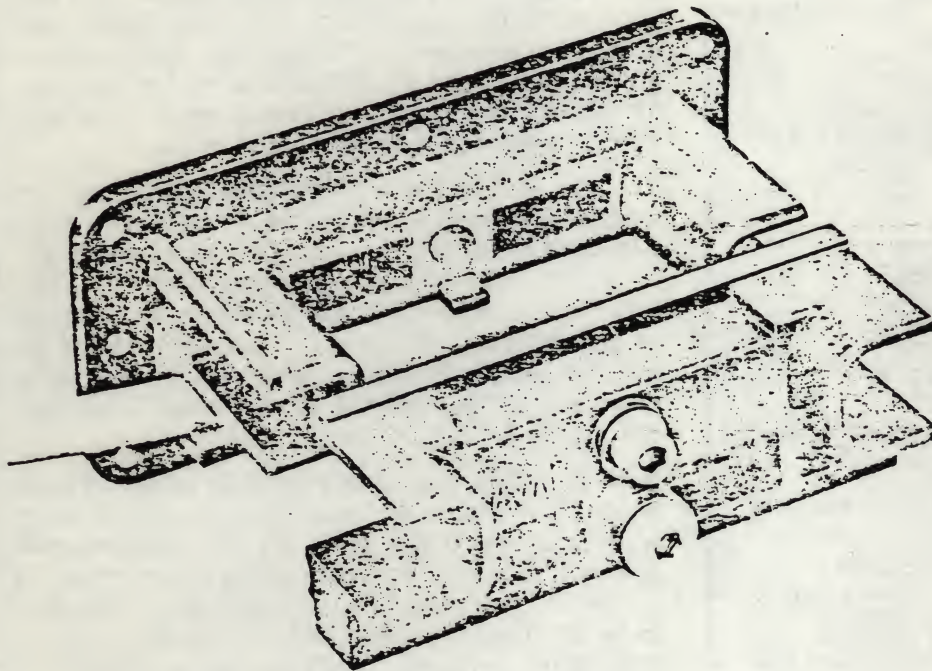
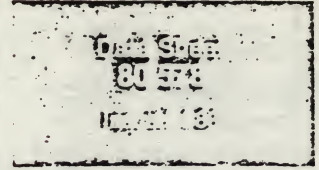
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Active Coaxial Tap with Mounting Flange



The new AMP Active Coaxial Tap makes fast, reliable tap connections to coaxial cable without cutting or interrupting service.

The tap enlists a design which captivates the center conductor of the cable between a pair of insulated metal probes. One of these is fixed and the other is spring loaded to insure a residual stored energy connection for long term reliability. The probes are designed to allow a minimum metallic obstruction in the space between the center conductor and the shield of the cable, thereby avoiding excessive insertion losses. In many cases, the sharp probes can pierce the cable unassisted. However, depending on the cable type, it may be necessary to prepare the cable for application by placing it in a simple jig and drilling pilot holes. A drill fixture kit is available from AMP for this purpose.

The tap has two sets of braid terminators which pierce the cable jacket and shield, deforming to crimp the cable braid between compliant prongs. When fully deformed, the braid terminators contain the spring energy to maintain long-term electrical contact.

Installation is fast and simple. The cable is simply positioned in the slot of the open tap, the tap closed and two allen screws tightened. The tap is designed with a flange for easy mounting to a transceiver housing. Provided are two guide posts for board alignment and three metal electrical posts for signal and ground connections. Interconnection may be made with AMPMODU receptacles.

Taps are currently available to accept 14 AWG [2 mm²], 10 AWG [5-6 mm²] and ETHERNET solid center conductor cables. Replacement probes and shield terminators are available for refurbishing the taps for reuse.

Features

- No cutting of coaxial cable
- No interruption of service
- Low insertion loss
- Residual stored energy connection for long-term reliability
- Simple installation
- Flanged for easy mounting
- May be surface or edge mounted
- Guide posts aid mounting alignment
- Compatible with AMPMODU Type A or Type C receptacles
- Reusable — replaceable probes and shield terminators

Technical Documents

AMP Instruction Sheet:
IS 6667 — Cable Tapping

AMP Design Guide:
DP 5525 — Cable Selection

Dimensioning:

All dimensions in inches and millimetres. Values in brackets are metric equivalents.

Metric symbols used are:
mm² (square millimetre)
N (newton)

Specifications subject to change.
Consult AMP Incorporated for latest design specifications.

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AMP ★ ACTIVE COAXIAL TAPS

Instruction Sheet

IS 6667

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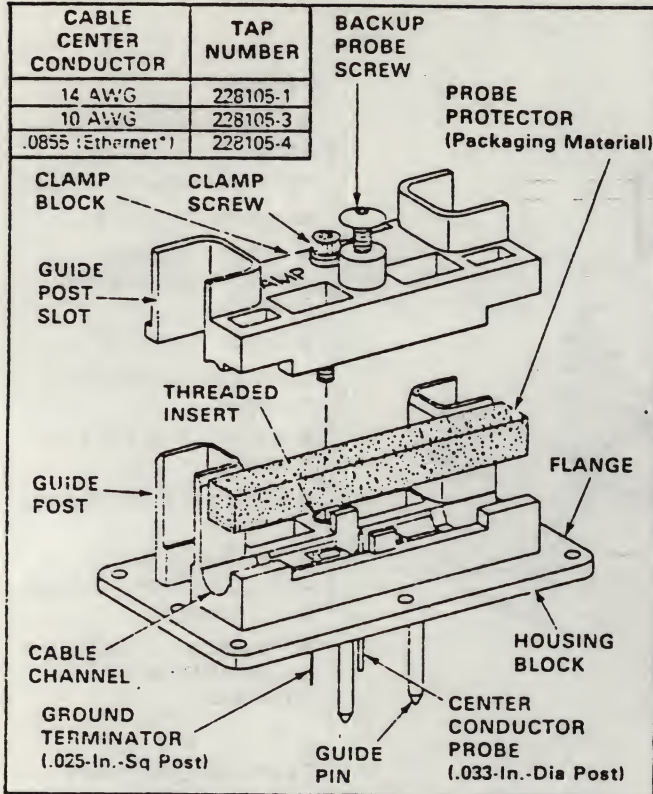


Fig. 1

1. INTRODUCTION

This instruction sheet (IS) covers installation of AMP Active Coaxial Taps onto any of the various cables used as a bus in data-generating and data-receiving equipment network systems. See Figure 1.

Read this material thoroughly before starting assembly.

2. DESCRIPTION

Each tap consists of a housing block and a clamp block. The housing block features two ground terminators, a center conductor probe, a cable channel, a threaded insert, two guide posts, two guide pins, a mounting flange, two .025-in.-square ground posts, and an .033-in.-diameter probe post. The clamp block features two guide post slots, a clamp screw, and a backup probe screw.

The taps, installed with AMP Active Coaxial Tap Tool Kit 228410-1, are designed to be placed in the system without interrupting service. This kit consists of a base plate, a drill block, a hex wrench, five insulated drill bits, a cordless drill, a drill charger, and a packet of ground braid terminators. These components are used to ensure precision placement of the probe holes and to stabilize the cable during installation. See Figure 2.

Note that drilling of probe holes is recommended; however, the taps can be attached to certain cables without drilling probe holes. To determine whether drilling is required, extensive probe insertion testing should be done to be sure that the probe will satisfactorily penetrate the jacket, shield, dielectric material, and center conductor, AND that the ground terminators will penetrate the jacket and shield without deformation.

3. TAP INSTALLATION

The tap can be edge or surface mounted to a pc board within the component compartment. We recommend AMPMODU★ Receptacle Contacts 87758-1 or 87768-1 for surface mounting (Figure 3) and 85863-4 or 85866-4 for edge mounting (Figure 4).

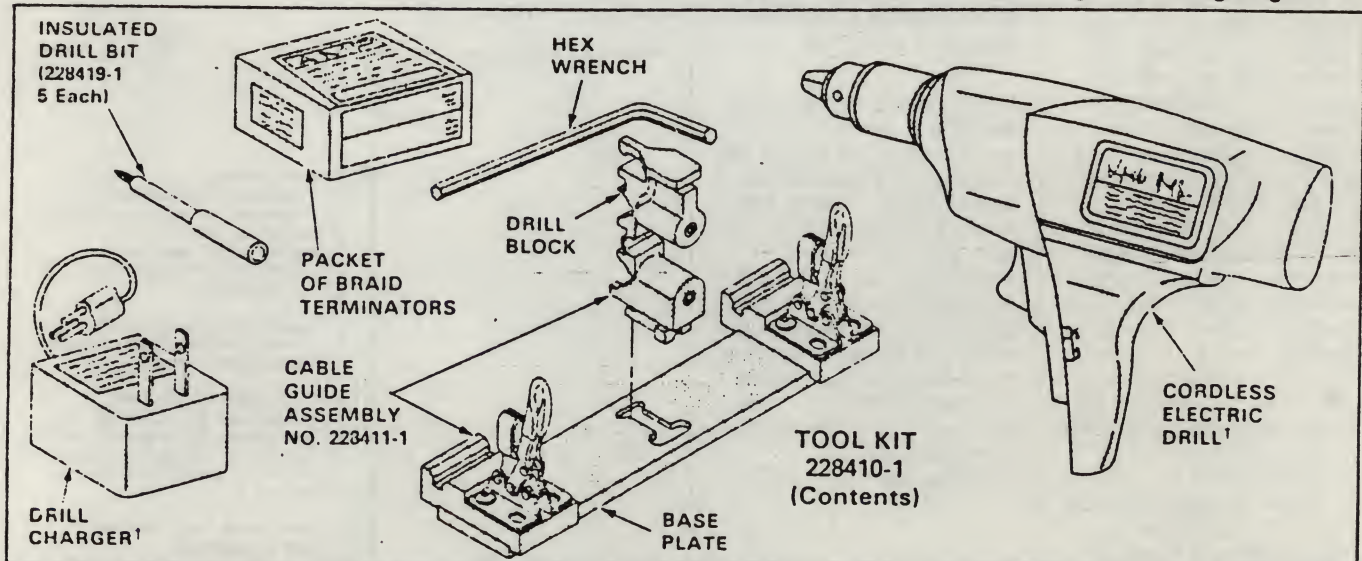


Fig. 2

* NOT SUPPLIED WITH 228410-3 KIT.

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AMP ACTIVE COAXIAL TAPS

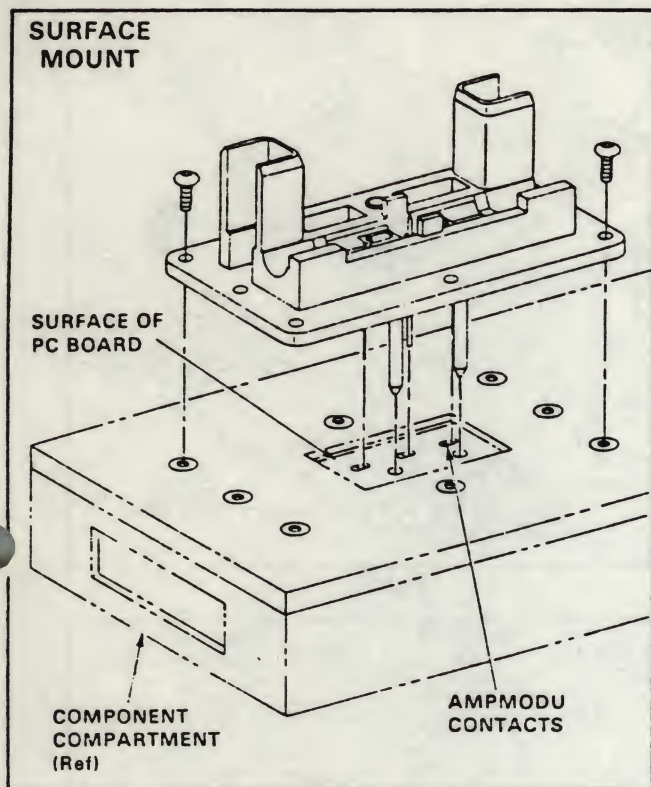


Fig. 3

CAUTION

Do NOT place taps closer together than 2.5 meters (8 1/4 ft) on a length of cable, nor place more than three taps in an area where parallel cables are within 0.6 meters (2 ft) of each other.

1. Make a layout on the pc board corresponding to the location of the contacts and guide pins.
2. Make a layout on your component compartment to accept the tap.

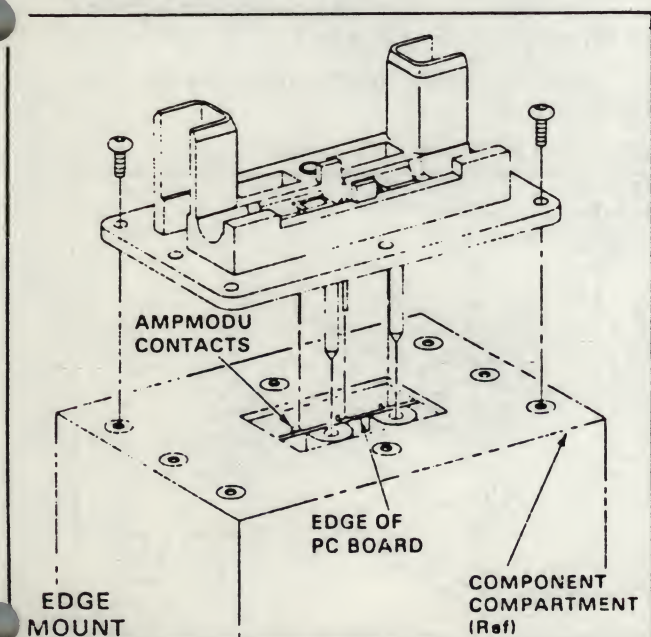


Fig. 4

3. Mount the pc board so that it will accept the contacts and guide pins, AND so that the tap mounting holes will align, as shown in Figure 3 or 4.

4. Secure the tap to the component compartment with screws and nuts or other suitable hardware.

4. ASSEMBLY PROCEDURES

The following procedures include drilling of probe holes. If your test results indicate that drilling of probe holes is not required, omit Steps 3 through 7 of Paragraph A, Cable Preparation.

A. Cable Preparation

1. Determine location for probe holes and note reference point on cable.
2. Open cable guide clamps and place cable in cable seats with reference point centered between clamps, then close clamp handles until locked in position. See Figure 5.

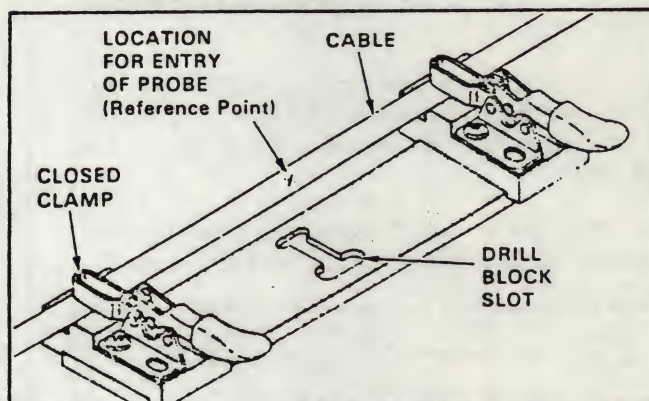


Fig. 5

3. Orient the drill block so the cable seats are toward the cable and the holddown is aligned with the wide slot in the base plate. See Figure 6.

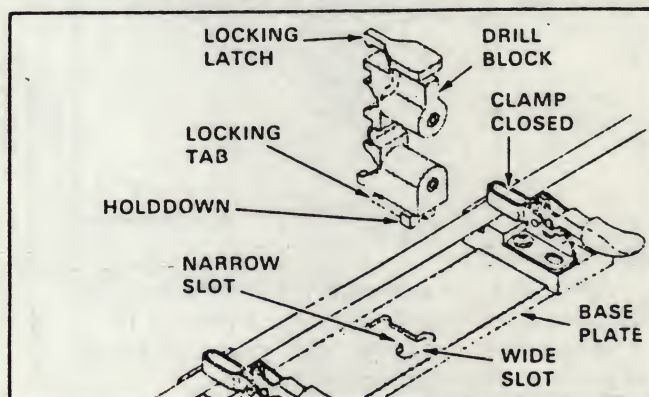


Fig. 6

4. Insert drill block holddown into wide slot, then slide holddown into narrow slot. Rotate top half of drill block down until locking latch engages locking tab on bottom half of drill block. See Figures 6 and 7.

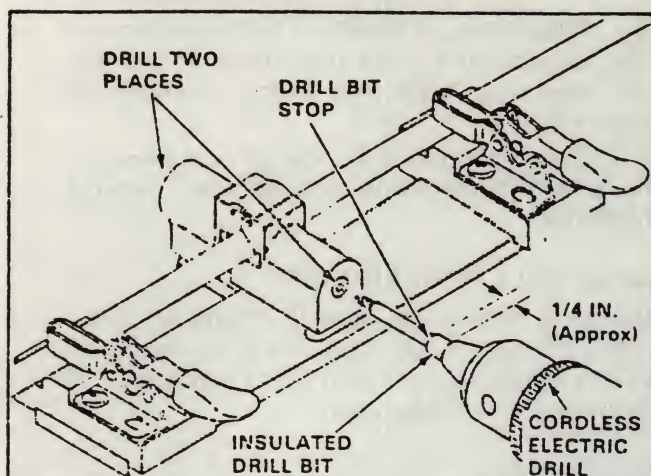


Fig. 7

5. Insert insulated drill bit into cordless electric drill and tighten chuck on insulation approximately 1/4 in. from end of stop. See Figure 7.

WARNING

Be sure to use insulated bit; otherwise, electrical shock or damage to the system could result.

6. Insert bit into locating hole and drill through cable until bit stop bottoms on hole. Repeat this procedure on the other side of drill block. See Figure 7.

7. Remove drill block from base plate. Do NOT remove cable guide from cable. See Figure 8.

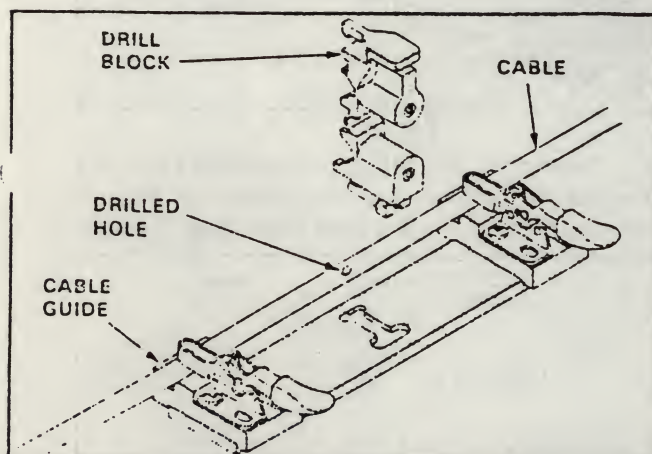


Fig. 8

B. Cable Installation

1. Unthread clamp screw, then remove clamp block and discard probe protector (Figure 1).
2. Align hole in cable with probe in block and place cable in channel (Figure 9).

CAUTION

Avoid rotation of cable when guide is installed on housing block; otherwise, damage to probe and cable could result.

3. Place clamp block on housing block and thread clamp screw in until the clamp block bottoms (Figure 10).

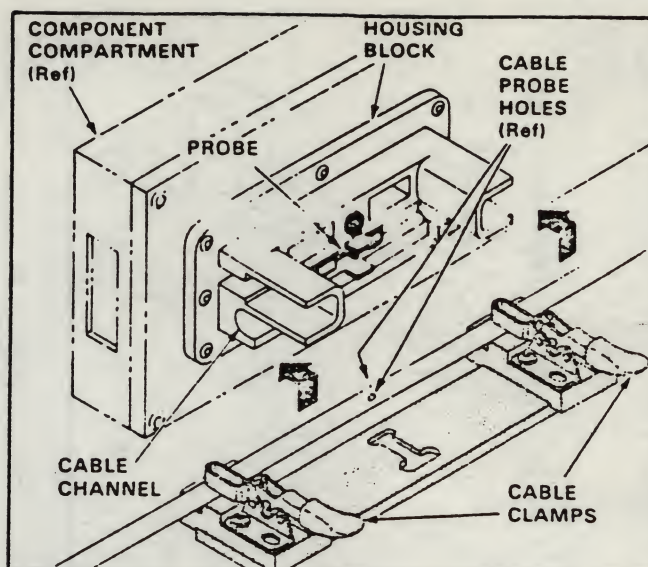


Fig. 9

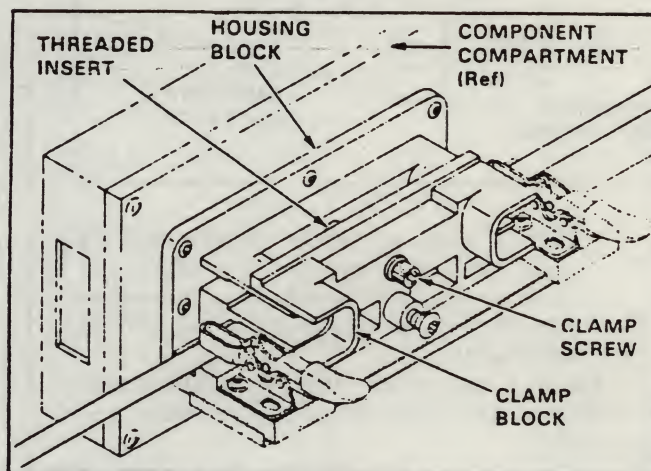


Fig. 10

4. Tighten backup probe screw until it bottoms on clamp block. See Figure 11.

5. Remove cable guide from cable. See Figure 11.

The installation of the tap is now complete.

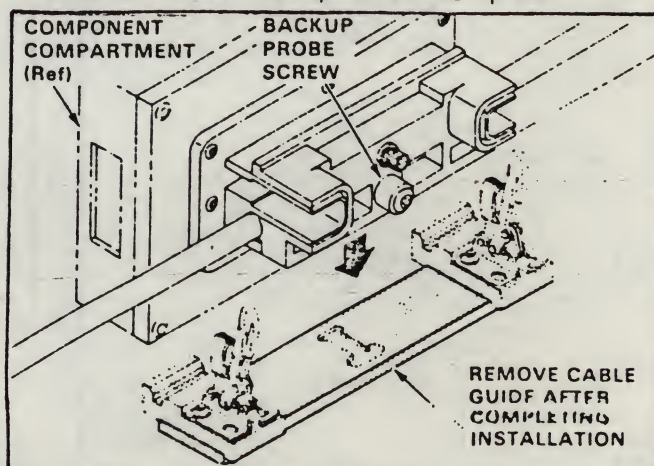


Fig. 11